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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,049	08/13/2001	Doron Gamliel	967X	6949
7590	06/16/2005		EXAMINER HASHEM, LISA	
Kevin Redmond 6960 SW Gator Trail Palm City, FL 34990			ART UNIT 2645	PAPER NUMBER

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/928,049	GAMLIEL, DORON	
	<b>Examiner</b>	<b>Art Unit</b>	
	Lisa Hashem	2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 2-3-2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 24-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## FINAL DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, in regards to claims 26 and 31, the 'IF port' in Figure 4 of the instant application must be shown or the feature(s) canceled from the claim(s). Also, in regards to claim 35, the following in Figure 4 of the instant application: '...the fourth node (N4) being connected with the eighth node (N8)...', '...the first transformer connected to the fifth node (N5)...', '...the second transformer connected to the fourth node (N4) and the eighth node (N8)...', '...the fifth transformer connected between the second node (N2) and the sixth node (N6)...', and '...the sixth transformer connected between the third node (N3) and the seventh node (N7)...' must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. Examiner acknowledges the new title of the invention in the Amendment filed on 8-27-2004.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 24, 25, 26-30 and 31-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitation ‘...an intermediate frequency balun connected in series to the radio frequency balun...’ is not described in the disclosure of the invention.

5. Claims 35-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitations ‘...the fourth node (N4) being connected with the eighth node (N8)...’, ‘...the first transformer connected to the fifth node (N5)...’, ‘...the second

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transformer connected to the fourth node (N4) and the eighth node (N8)...', '...the fifth transformer connected between the second node (N2) and the sixth node (N6)...', and '...the sixth transformer connected between the third node (N3) and the seventh node (N7)...' are not described in the disclosure of the invention and in Figure 4 of the instant application

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 24 recites the limitations "the fifth winding series" and "the eighth winding series".

There is insufficient antecedent basis for these limitations in this claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,854,974 by Li in view of U.S. Patent No. 6,278,872 by Poulin et al, hereinafter Poulin.

Please see the rejection of claim 24 in the Non-Final Office Action mailed on 12-28-04.

10. Claim 25, is rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Poulin, as applied to claim 24 above, and in further view of U.S. Patent No. 3,913,037 by Himono et al, hereinafter Himono.

Please see the rejection of claim 25 in the Non-Final Office Action mailed on 12-28-04.

*Response to Arguments*

11. In regards to Applicant's remarks concerning claim 24, '...Neither Li nor Poulin do not disclose the windings of the radio frequency balun series connected to the windings of the intermediate frequency balun...', claim 24 of the instant application does not disclose '...the fifth winding is series connected to the ninth winding...' and '...the eighth winding is series connected to the twelfth winding...'. Instead the following is disclosed 'the fifth winding series connected to the ninth winding, the eighth winding series connected to the twelfth winding...'. Examiner has interpreted 'the fifth winding series' and 'the eighth winding series' in claim 24 to mean the fifth winding (W5 in Figure 4 of the instant application) and eighth winding (W8 in Figure 4 of the instant application), respectively. Wherein, the addition of the IF balun of Poulin and the IF balun of Li (modified IF balun with four windings) would be connected to the RF balun of Li via the diode rings (see Figure 3 of Li and Figure 3 of Poulin). Therefore, the rejection of Li in view of Poulin is valid. Please see the rejections above.

12. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

13. Applicant's arguments of claims 24 and 25 have been fully considered but they are not persuasive. Therefore, the rejections of claims 24 and 25 are **FINAL**.

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14. Applicant's arguments with respect to claims 26-37 have been considered but are moot in view of the new ground(s) of rejection.

15. Accordingly this Action is **FINAL**.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- U.S. Patent Application Publication No. 2002/0032016 by Ji discloses a dual double balanced mixer wherein the IF balun has two transformers (four windings)

17. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. Any response to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

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**Or call:**

(571) 272-2600 (for customer service assistance)

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Hashem whose telephone number is (571) 272-7542. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LH

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June 12, 2005

  
FAN TSANG  
SUPERVISORY PATENT EXAMINER  
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